

**LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A method for selecting a transmission channel from several transmission channels of a receiver of orthogonal frequency division multiplexing radio signals with antenna diversity, with a view to favouring the transmission channel delivering a signal with the lowest binary error rate, the method comprising: estimating the binary error rate for each transmission channel by feeding a neural network with data representative of a frequency response of the transmission channel and selecting an antenna based on the output of the neural network.
2. (previously presented) The method according to Claim 1, in which the data representative of a frequency response of the transmission channel are diverted in the receiver at the output of a module for calculating a fast fourier transform.
3. (previously presented) The method according to Claim 1, in which the neural network has undergone learning to evaluate, on the basis of the data representative of a response of the transmission channel, a power level of the signal on the transmission channel which would be necessary to obtain a predetermined binary error rate and in which the output of the neural network is processed with data representative of an actual power level of the signal on the transmission channel so as to evaluate a binary error rate for the transmission channel.
4. (original) The method according Claim 1, in which the model of the neural network is a multilayer perceptron.

5. (previously presented) A receiver of orthogonal frequency division multiplexing signals with antenna diversity for implementing a method for selecting a transmission channel, comprising:

- a plurality of antennas;
- an orthogonal frequency division multiplexing signal processing chain coupled to the plurality of antennas; and
- a switch shifted so as to connect the input of a signal processing chain to the antenna which provides a signal exhibiting the lowest binary error rate, the shifting of the switch being controlled on the basis of an information produced at the output of a neural network connected to estimating means providing data representative of the frequency response of the transmission channel.